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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/053,878	01/24/2002	Alexander Bublewitz	P66496US1	7201

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EXAMINER

ZIMMER, MARC S

ART UNIT

PAPER NUMBER

1712

DATE MAILED: 04/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/053,878

Applicant(s)

BUBLEWITZ ET AL.

Examiner

Marc S. Zimmer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 14-25 is/are rejected.
- 7) ☒ Claim(s) 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/808,412.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4-6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 9 and 11 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 9 is awkward in the sense that it attempts to limit two different aspects of the invention simultaneously. That is, claim 9 intends to further delineate the favored condensation catalysts and crosslinking agents yet there is no indication what members of the list that follows exemplify the crosslinking agents and what members exemplify the catalysts. Indeed, the claim reads precisely as the disclosure of this element of the invention at page 13 of the Specification. Clarification is required. It is recommended that Applicant rewrite this portion of the disclosure separating the catalysts and crosslinking agents into separate paragraphs. Likewise, two claims may be written each of which discloses only one component of the system.

As for claim 11, it cannot be ascertained what precisely a "PR-functional" polyether is.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 5-7, 14, and 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter

which applicant regards as the invention. Each of these claims disclose several structural classes to which each of R¹ to R⁵ may belong. In disclosing these subclasses, Applicant uses the word “especially” to emphasize those moieties that are particularly preferred. Prior to the recent changes in Office policy regarding U.S.C. 112, second paragraph rejections, this language would have been deemed unacceptable as being tantamount to disclosing a range-within-a-range. While this is no longer the case, the preferred species must still be members of the genus disclosed before them. In Applicant’s description of R¹ in claim 5, the preferred species are identified as –H, –OH, alkoxy, and acyl (presumably acyloxy), yet none of these are members of the genus discloses prior. The same mistake was made in Applicant’s disclosure of R⁴ of claim 5 as well as at least one of the variables recited in claims 6 and 7. Correction is required.

Claim 16 suffers from the same issue as do claims 5-7. That is, the materials named in the last four lines of the claim are not examples of forms of titanium dioxide, aluminum dioxide, and zinc dioxide.

Also, there is no antecedent basis in claims 5-10 for the limitations of claim 14 as these claims are dependent from claim 1 as opposed to claim 4 where component (i) is first described.

Claim Analysis

It is observed that the invention is initially claimed in terms so broadly stated that literally hundreds of patent documents could be invoked in a statement of rejection. Indeed, an addition-cured polysiloxane composition containing an organotrialkoxysilane as an adhesion promoter and corresponding to (d2), of which there are many, would

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read on a number of the claims. Furthermore, while claims 5-7 contemplate the employment of only organosilicon polymers, hydrocarbon polymers, polyesters and polyethers to fulfill the role of components (a), (d1), and (d2) in the more specific embodiments disclosed in claims 5-7, claim 1 is essentially non-limiting with respect to these compounds. In fact, component (a) is not necessarily even a polymer. Instead, (a) may be a small molecule diene, an alkenylated isocyanate derivative, anything. Nevertheless, to greatly reduce the length of the Examiner's comparison of the prior art against the instant invention, only those references teaching compositions that cure by two mechanisms will be discussed herein.

It is also noted that, though claims 2 and 3 disclose the system as one originally prepared as two parts, said parts do not necessarily have to contain only those materials expressly delineated in view of their usage of the transitional phrase "contains". The transitional term "comprising", which is synonymous with "including," "containing," or "characterized by," is inclusive or open-ended and does not exclude additional, unrecited elements or method steps. See, e.g., *Genentech, Inc. v. Chiron Corp.*, 112 F.3d 495, 501, 42 USPQ2d 1608, 1613 (Fed. Cir. 1997) ("Comprising" is a term of art used in claim language which means that the named elements are essential, but other elements may be added and still form a construct within the scope of the claim.); *Moleculon Research Corp. v. CBS, Inc.*, 793 F.2d 1261, 229 USPQ 805 (Fed. Cir. 1986); *In re Baxter*, 656 F.2d 679, 686, 210 USPQ 795, 803 (CCPA 1981); *Ex parte Davis*, 80 USPQ 448, 450 (Bd. App. 1948) ("comprising" leaves "the claim open for the

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inclusion of unspecified ingredients even in major amounts"). This point is significant as it allows the Examiner to reject claims 2 and 3 over one of the references cited *infra*.

The fact that components (f) through (m) in claim 4 are disclosed in the alternative (and/or) suggests that not all of these must be present for the claim to be anticipated.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-11, 15, 18, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by King et al., U.S. Patent # 5,696,209. King discloses a dual-curable polysiloxane-based adhesive composition comprising each of the following essential ingredients (column 2):

- (A) an alkenyl-functionalized MQ resin,
- (B) an organohydrogenpolysiloxane (column 4, lines 11-41),
- (C) a silane adhering to the formula $R^1_{4-y}Si(OR^2)_y$,
- (D) a platinum hydrosilylation catalyst (column 4, lines 65-67 through column 5, lines 1-9), and
- (E) a condensation catalyst selected from, among others, stannous octoate, dibutyltin diacetate, and bis(acetylacetonatyl) diisopropyltitanate (column 5, lines 14-27)

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Notably, King mentions as an optional component (F) an alkene- or alkyne-functionalized polydiorganosiloxane having a viscosity of from 100 to 80,000 mm²/s. Therefore, in instances where (F) is incorporated along with (A) through (E), their invention corresponds to the embodiment of the instant invention wherein both (d1) and (d2) are present. Other optional materials include fillers, antioxidants, pigments, and heat stabilizers (column 6, lines 61-63). Insofar as fillers are generally of the reinforcing or non-reinforcing type, claim 4 is anticipated by King's mention of fillers. Solvents (inert carriers) are also contemplated in column 7.

The above composition may be formulated in one- or two parts. If it is desirable to prepare the composition in two parts, King advocates formulating (A), (B), and (F) as one part and (A), (C), (D), (E), and (F) as a second part (column 7, lines 31-48).

As for claims 5 and 6, component (F) is exemplified by a linear, alkyne-terminated polydiorganosiloxane according to column 5, lines 33-38 consistent with the embodiment of claim 5 wherein X is a polysiloxane and R² is -Si-C≡C-R¹ and the first embodiment mentioned in claim 6 wherein R⁵ is -C≡C-R¹. The reported viscosity of this compound is characteristic of a silicone having between 7 and 6,000 repeat units.

As for claim 7, where X is an oligo/polysilicic acid, the claim is anticipated in view of King's admission that (A) is a resinous silicone.

As for claims 11 and 15, amines, polyamines, phosphines, and maleic acid derivatives are among the compounds to be employed as hydrosilylation catalyst inhibitors according to column 6, lines 1-15. Further, one of ordinary skill will appreciate that these same compounds will also lower the reactivity of the condensation catalyst

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present. In each instance, catalyst activity is modified by reversibly coordinating to the active metal center thereby reducing the number of coordination sites available at which reaction may occur.

Claim 18 calls for the incorporation of MQ resins that would be satisfied by component (A) of King's invention.

Claims 1, 5-6, 8, and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Antonen, U.S. Patent # 4,754,013. Antonin discloses a composition (column 2, lines 61-68 and column 3, lines 9-45) comprising a blend of (i) a hydrosilylation-cured silicone composition, (ii) an MQ resin, and (iii) a condensation-curable siloxane-based composition made up of a silanol-endblocked polydiorganosiloxane, an organosilicon crosslinking agent, and a titanium orthoesters or chelated titanium as the catalyst. Alternatively, a crosslinked product derived from the ingredients of (iii) may first be prepared and then blended with the components (i) and (ii). Descriptions of each of the ingredients follows with a vinyl group-terminated polydiorganosiloxane being mentioned at column 4, lines 32-61, an organohydrogensiloxane at column 6, lines 14-33, and a platinum hydrosilylation catalyst at column 6, lines 62-68. The materials that comprise the condensation-curable system are disclosed primarily in column 8 of the reference.

Claim 5 is anticipated by the linear hydroxyl group-terminated polysiloxane, which corresponds to (d2) wherein X denotes a polysiloxane, and R^2 an $-OH$ group.

Claim 6 is anticipated by the linear hydroxyl group-terminated polysiloxane, which corresponds to the $-OR$ group-functionalized siloxane compound wherein R^5 represents an $-OH$ group.

Claim Rejections - 35 USC § 102/103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 20-25 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over King et al., U.S Patent # 5,696,209. Insofar as the compositions disclosed by King and Applicant mirror one another in virtually every respect, it is the position of the Office that the multiple-stage cure and the properties recorded at each step will be inherent in King's composition. "p[P]roducts of identical chemical composition can not have mutually exclusive properties." A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present. *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). See also *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). "Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical

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processes, a prima facie case of either anticipation or obviousness has been established."

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 12, 16, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over King et al., U.S. Patent # 5,696,209 in view of Lutz et al., U.S. Patent # 6,201,055. Though King makes cursory mention of fillers at column 6, line 62, there is no indication as to what fillers are most useful in the formulation their addition-curable PSA. Lutz, on the other hand, instructs that silica is an important additive where the PSA is to be employed in the manufacture of electronic devices for its ability to lower the coefficient of thermal expansion of the composition (column 1, lines 41-52 and column 2, lines 1-5). Concerning claim 12, one of ordinary skill will appreciate that silica inherently contains surface bound water molecules unless measures are taken to remove the adventitious water prior to use. No such steps appear to be disclosed by Lutz hence the silica recommended as an additive by that reference will inherently donate water in the composition disclosed by King.

Information Disclosure Statement

A number of the foreign references in Applicant's IDS have been crossed out because only their U.S. equivalents, and not the foreign patents themselves were submitted. The Examiner has written in several U.S. documents not originally cited.

Allowable Subject Matter

Claim 13 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Kawamura, U.S. Patent # 5,684,110, Ohsugi et al., U.S. Patent # 5,321,082, Barthel et al., U.S. Patent # 6,348,557 and Yamada et al., U.S. Patent # 5,945,475 are cited as being germane to at least some embodiments of the claimed invention but will not be used as a foundation for rejection at this time.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc S. Zimmer whose telephone number is 703-605-1176. The examiner can normally be reached on Monday-Friday 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Dawson can be reached on 703-308-2340. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

April 25, 2003

A handwritten signature in black ink, reading "Robert A. Dawson". The signature is written in a cursive style with a large, stylized 'R' and 'D'.

Robert Dawson
Supervisory Patent Examiner
Technology Center 1700